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CLINICAL NOTES ON SCABIES.

BY

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CLINICAL NOTES ON SCABIES.

BY F. B. GREENOUGH, M.D.

At the present time, scabies is, or certainly ought to be, one of the most thoroughly understood of cutaneous diseases, as to its cause, symptoms, course, treatment, etc., and it is with no hope of giving any new information on the subject that I have compiled the following brief clinical notes. Having had, however, the chance during the past few years of seeing a large, and recently a steadily-increasing number of cases, I have been much interested in the subject, and have thought it might perhaps not be entirely useless to record some of the facts to which my attention has been especially called. I wish to premise, however, that I have no intention of attempting to give a full account of a disease which is so well known to the profession as scabies, but shall simply refer to those points which have especially struck me as being interesting in the quite large number of cases seen.

That scabies is much more prevalent at present than formerly in Boston and its vicinity, is shown not only by my individual experience, but by that of my colleagues who have charge of hospital dermatological services, as well as by the testimony of general practitioners. The probable reason for this very decided increase is to me one of the most interesting points of the subject. Scabies being contagious, its propagation to persons thrown into intimate relations with the individual who suffers from it is to be expected, but why, after being for some years comparatively rarely seen, it should all at once take a start, and increase in frequency very rapidly, is not so easily explained.

During and immediately after the war, as would be naturally expected, it was quite prevalent, and undoubtedly the large number of medical men who were connected with our army and navy service learned to recognize and treat it, and carried their knowledge of the disease with them into the practice which they settled into after the war was over. It certainly is a fact that for some years after the war, the disease became more rare, and it seems fair to assume that it was more rarely seen because, when seen, it was generally recognized and properly treated. The new generation of medical men that heard little, and saw less of it, would naturally not always recognize it, and of course, every case that was not recognized became a focus of contagion. Whatever the cause may be, there can be no question but what scabies has increased in prevalency most decidedly, at least in Boston and its neighborhood. That such is the case the following figures will show. The special service for skin diseases at the Boston Dispensary was started July 1, 1873, and I had the honor of being put in charge of it. I saw, during the

1st year,	up	to	July	1,	1874,	. .	14	cases of scabies.
2d	"	"	"		1875,	. .	17	" "
3d	"	"	"		1876,	. .	25	" "
4th	"	"	"		1877,	. .	3	" "
5th	"	"	"		1878,	. .	6	" "
6th	"	"	"		1879,	. .	3	" "
7th	"	"	"		1880,	. .	10	" "
8th	"	"	"		1881,	. .	8	" "
9th	"	"	"		1882,	. .	25	" "
10th	"	"	"		1883,	. .	39	" "
11th	"	"	"		1884,	. .	85	" "
12th	"	"	"		1885,	. .	156	" "
13th	"	"	"		1886,	. .	160	" "
							549	

The proportion which these cases of scabies bear to the number of cases of skin disease seen is as follows. I did not at first tabulate my whole number of cases yearly, but waited until I had 5,000 cases before doing so. These 5,000 cases covered, in time,

from July 1, 1873, to November 25, 1876, and of these 5,000 cases 55 were of scabies, making a percentage of 1.1 per cent. From November 26, 1876, to June 30, 1878, I saw 2,494 cases of skin disease, of which eight were scabies, making 13 + per cent. After that date I recorded the cases yearly, the result being as follows:

From July 1,	1878,	to June 30,	1879,	total	872,	scabies	3 =	.3+%
"	1879,	"	1880,	"	804,	"	10 =	1.2+%
"	1880,	"	1881,	"	1,023,	"	8 =	.8—%
"	1881,	"	1882,	"	1,088,	"	21 =	2.0+%
"	1882,	"	1883,	"	881,	"	39 =	4.0+%
"	1883,	"	1884,	"	1,063,	"	85 =	8.0—%
"	1884,	"	1885,	"	1,299,	"	156 =	12.0+%
"	1885,	"	1886,	"	1,220,	"	160 =	13.0+%

From these figures it will be seen that while from November 26, 1876, to June 30, 1878, the percentage of scabies to other cases of skin disease seen was a little over three-tenths per cent., during the last dermatological year it rose to over thirteen per cent. During the past year I have asked the patients with regard to the number of similar cases in the same family or household which I had not seen, and, as a result, have 110 cases recorded as existing in addition to the 160 seen. These make, with six that I have seen in my private practice, 276 cases of scabies that have come under my cognizance in the past year. Up to three years ago, I had never seen a case of scabies in private practice. Those that I have seen since belonged to a class in which one would not expect to find this disease. From one of them I learned that in a neighboring small city the disease had become quite prevalent in an upper and decidedly exclusive social circle, affecting ladies, as well as men, and it seemed pretty evident that a very popular young gentleman had been the innocent source of the epidemic, he having brought the disease home with him from a yachting trip.

Considering the contagiousness of this disease, the fact that it is by no means self-limited, and the free circulation which exists between our cities and the county districts, the existence of such a number of foci of contagion might prove a source of serious trouble, especially if they were scattered over farms, in lumber camps or factories, where they would be brought in close contact with others, and where the disease would not be apt to be recognized. Since the end of our dermatological year, I have seen, in private practice, three more cases, two of them young gentlemen who had just finished their college course, and have incidentally heard of several others.

Scabies is, of course, not a disease that endangers the health of the community, nevertheless it is one that, if once well started, might be a source of infinite trouble and annoyance. If it should continue to increase, it seems to me that it would be well worth the while of our Boards of Health to take what steps they could towards controlling it. At least, some intelligent supervision of the children in our public schools might be attempted, and one of the most fertile sources of infection controlled. It would seem, however, that the increase of the disease has about reached its climax, as after an annual augmentation since 1881 yearly, from 0.8, 2+, 4+, 8, 12+, last year it was 13+ per cent. Of the 549 cases seen, 339 were males, and 210 females, respectively, about 60 and 40 per cent. The ages of the cases seen were as follows:

Under 1 year old, (1 each of 4, 5 and 6 mos., and 2 of 9 mos.)	5
Between 1 and 5 years,	26
" 5 " 10 "	65
" 10 " 15 "	75
" 15 " 20 "	95
" 20 " 30 "	182
" 30 " 40 "	62
" 40 " 50 "	23
" 50 " 60 "	12
" 60 " 70 "	3
" 70 " 80 "	1
	549

From this table it would appear that the disease is essentially one of childhood and early adult age, very nearly four-fifths of the cases, that is, 417 out of 549, occurring in patients between the ages of 5 and 30, and that after 50 it is comparatively rare, as only 16 cases were seen who were over 50 years old. This seems to be rationally explained by the fact of the epidermis in advanced life becoming harder and dryer, and consequently not being so well suited for the nourishment and propagation of the acarus.

The class of the community from which the bulk of these patients have been drawn, has been a matter of interest and surprise to me, it not having been that which one would expect. The children, as a rule, have been scholars in the public schools, and that is natural enough, but they have, with few exceptions, belonged to rather the better class of public school pupils, that is to say, they have been nicely, or at least cleanly dressed. The adult females, with the exception of some girls who worked in rooms where several of them were brought in contact with each other, were mothers of families, who had probably been infected by their children or husbands. The adult males have been, almost without exception, artizans or mechanics of the better class. Certainly the classes of tramps, beggars and low prostitutes have been conspicuous by their absence from the list of those seeking treatment for this disease. In most of the cases that were not married, both male and female, there was generally the history of a room-mate, if not a bed-fellow, and I have no doubt but what the spread of the disease is in a measure due to the custom which young people, who are working for a living, have, of diminishing their expenses by sharing a room in common. One of the points that has struck me as most marked in the cases I have seen, is

the comparative rarity of typical burrows. When I say comparative, I mean as compared with the cases I have seen in Vienna, Paris and London. I do not think I am at all overstating it when I say that even in well-developed cases of scabies, it has been decidedly the exception when I have been able to find a good specimen of a burrow. Whether this shows that our patients wash their hands more frequently and more thoroughly than those abroad, I am not prepared to say, but of the fact I have no question. The wrist, on its flexor side, in the fold of the skin made at the ulnar-carpal articulation in the vicinity of the styloid process, has seemed to me to be a more constant territory on which to find, if not burrows, at least the characteristic vesicles than even the classic region between the fingers. In the male subject the penis furnishes a most important field for examination. In a case that seemed to be at all fully developed I should consider the presence or absence of efflorescences on this organ as a most important diagnostic sign. The lesions found there are also very characteristic. On the shaft, or anywhere on the prepuce, I have seen perfect burrows oftener than any where else. As a rule, the lesions are papules, which may have a burrow on them, or may have become pustular or may be simply red papules, with a perfectly smooth and unbroken surface. I have, on the other hand, seen in this situation serpentine burrows without any signs of congestion, or exudation. In subjects where the glans is uncovered, papules may be found on it, which sometimes are pustular, but I have never seen a burrow on the glans, nor have I ever seen any efflorescence due to scabies, on a glans which was habitually covered by a long prepuce, that is, where the integument of the glans was a true mucous membrane. It was owing to the existence of these

lesions on the penis that several patients came for medical advice, thinking that they had some venereal trouble, some of whom had already been put on constitutional treatment for syphilis. In spite of the most careful searching, I have never been able to find anything resembling a burrow outside of the region of hands, wrists and penis, except in cases of infants, on whose feet, especially in the vicinity of the ankles, I have seen very typical ones.

The secondary, if I may use the term, or artificial, lesions in scabies, that is those that are caused by scratching and rubbing, vary in the different regions of the cutis on which they are developed. This difference, although perhaps only one of degree, is pretty constantly seen in most cases. The regions most likely to show these lesions, are, the forearms, especially about the elbow, over the supinator muscles, the gluteal region, the abdominal walls, the anterior aspect of the thighs, and the lower leg. Given a general irritation of the skin, these regions, in the order named, are certainly the easiest to scratch. This is especially true with regard to the elbow, and in point of fact, it is in this locality that the result of irritation is most manifest. In this situation we frequently see a patch of crusty eczema, exactly like that observed on the cheeks or forehead of infants. In the gluteal region the scratching is more likely to cause single lesions, more like impetigo, even approaching a furuncular character, while on the anterior aspect of the thighs and lower legs, as is also the case on the abdominal walls, the lesions consist of small papules the apex of which has generally been scratched off.

I take it that the reason of constantly finding an eruption of an eczematous character about the elbows, is that from its situation it can be scratched or rubbed by day as well as night, but that the scratching is gen-

erally done outside of the sleeve, whereas in the other regions mentioned, at least during the night, the finger-nails get at the bare skin, and excoriate the raised papules. The aggravation of the itching after going to bed is one of the most constant symptoms complained of. It is generally ascribed to the heat of the bed-clothes, but I think that is not the only factor. Patients will state that any violent exercise, or getting heated in any way, will increase the pruritus, but not to the extent to which it is aggravated nightly on their retiring. It seems to me perfectly plausible to assume that during the night when the patient is quiet and seeking sleep, would be the time when the acari would be most active in getting their nourishment and moving about. Perhaps, also, the ease with which the itching regions can be scratched at this time, should be taken into consideration.

Be this as it may, the fact of the cutaneous irritation being decidedly increased after going to bed, is a very constant and important diagnostic sign. Any practitioner of medicine who has seen many cases of scabies, will in the great majority of those that are brought under his observation make his diagnosis from the general appearance of the case, that is to say, he will say to himself, this is a case of scabies, because it is, exactly as when we see a horse, we know it is a horse, and do not go through the process of deciding that it cannot be a cow because it has no horns, or a pig, because its hoofs are not split, etc.

Cases do occur, however, where the diagnosis is not so easy, and the ability to differentiate it is important. During the past two years I have seen several cases which I have diagnosticated, treated and cured as scabies, which if I had seen ten years ago when the disease was comparatively rare, I should not have recognized. As the disease is by no means a self-limited

one, and each case is a possible or even a probable source of contagion to those who are brought in contact with it in early life, it certainly is a matter of considerable public importance that it should be diagnosticated and cured, and luckily it is one of the unfortunately few diseases that we can pretty confidently claim to be able to cure. That personal cleanliness, bathing, change of linen, etc., act as prophylactics, I suppose we must admit. I have no question but what I myself had a slight attack of scabies during the past winter. I had seen and handled many cases, and had handled them pretty thoroughly, as I was anxious to see if I could find any burrows in the general integument. I certainly had a great deal of itching between the fingers and about the wrists, and at night I scratched myself so as to make decided lesions on my forearms and shins. I never could find any characteristic appearances and just as I had made up my mind to treat myself, the symptoms gradually disappeared, as I believe, simply from the use of soap and water, in my daily bath. On the other hand, I had quite recently seen a young Harvard graduate, decidedly a swell, who tubbed it as much as any anglo-maniac and probably changed his linen daily, who was suffering with a very generally-developed case of itch.

In a few instances I have seen what would lead one to suppose that a personal susceptibility might have some influence. That is to say, I have seen two mothers of families of several children, all of whom had the disease, and yet the mothers escaped. I also have seen a child out of a large family affected, free from the disease although it was thrown in with the others, and in one instance, slept with an infected member of the family.

The finding a burrow in any suspected case, of course settles the diagnosis, but in my experience the

cases in which this can be seen are not common. The distribution of the manifestations of the disease is what *we* have to fall back upon, and this is usually quite characteristic. If burrows are not to be seen, small vesicles, which are almost as characteristic, will be seen between the fingers on the ball of the hand, and at the wrist, with more or less lesions on the forearms, abdomen, gluteal regions and legs, according to the duration or severity of the attack. The condition of other members of the family is important, and the nocturnal aggravation of the itching should be taken into account. With regard to differential diagnosis, scabies might be, and without doubt, often is, confounded with any of the cutaneous diseases which have pruritus as a prominent symptom, and strange to say, its manifestations on the cutis, have in several cases which have come under my observation, been taken for those of syphilis, in which the absence of itching is universally noted. This mistake has been made not only by the patients, but by physicians, whom they had consulted. One would suppose that the irritation of the skin produced by the presence of vermin, that is, pediculi vestimentorum, would be very much of the same kind as that due to the presence of the acarus. The manifestations, however, of these two parasites are quite distinct, and can be easily recognized. The chief difference is to be found in the locality where the results of the irritation are seen. The body-louse, having its habitat on the clothing, irritates that part of the skin with which the clothes are most constantly in contact, that is to say, the shoulders, breast and waist — the uncovered hands not being affected at all. I should say also that the lesions, produced by scratching in cases of pediculosis, have decidedly a greater tendency towards a furuncular inflammation, and the pigmentation of the regions affected is much more

marked. It is difficult to form an idea as to the comparative degree of itching from the account given by the patients, but I certainly have never seen the deep excoriations made by the finger-nails in cases of scabies that I have in patients infested with body-lice. As my figures have shown, the aged are comparatively exempt from scabies, whereas the victims of pediculi vestimentorum are, as a rule, well along in life. I have been very much astonished by the fact that I have never seen a patient who was afflicted by the itch and body-lice, simultaneously, as one would suppose that the same influences that would expose them to the contagion of the one, would also to that of the other, that is to say, lack of cleanliness, and being thrown in contact with people of similar habits.

It is not easy to determine sometimes whether we have a case of commencing scabies, or one of hyperæsthesia or pruritus. As in cases of general pruritus the regions most easily scratched show most the results of scratching, we find in them the forearms, abdomen, gluteal regions and legs excoriated, very much in the same way as we do in cases of scabies. These cases however, are usually found in old people (pruritus senilis), where the age would be against scabies, or are due to a retention of the biliary secretion, in which case we should have the icterus to guide us.

I will not take time to refer to the differential diagnosis between scabies and urticaria, acute papular eczema, prickly heat, etc., but will merely say that scabies ought to be recognized (although my experience would show that it by no means always is) by the fact of lesions being found between the fingers, on the ball of the hand, and wrists, if not characteristic burrows, at least small vesicles; by the presence of characteristic lesions on the penis in the male subject: by the existence of secondary manifesta-

tions on the forearms, buttocks, abdomen, thighs and legs, more or less developed, as the case is of longer or shorter standing; by a decided increase of discomfort in the way of itching during the night, and by the fact that others who are thrown into intimate relations with the patient, are similarly affected. That it is important that it should be recognized and treated, I do not think that there can be any question of. I have been very much surprised by the success of treatment in these cases. It has been so successful in my dispensary work that I have, as a rule, used the same method in private practice. The formula that I have used is the old sulphur ointment that Hardy introduced years ago at the St. Louis, one part of carbonate of potash, two of sulphur, and three of vehicle, for which I have taken petroleum ointment instead of lard, and I can not help thinking that its efficacy has been increased by the change. The objection to the use of sulphur is, of course, its irritating action on the eczematous and pustular secondary eruptions. I have, however, used it in the great majority of the five hundred and forty-nine cases I have seen, and with very good results. We were, until a couple of years ago, only allowed at the dispensary to order a half ounce of ointment, but now we can dispense two ounces. When one thinks of what two ounces will do in the way of treatment for a patient who is pretty well covered with the eruption, it certainly seems extraordinary that very few cases prove obstinate, as has been the fact. My instructions are to grease the hands thoroughly and a hand's breadth above the wrists nightly, and to apply it on the lesions on the trunk and limbs here and there, avoiding however any pustular or excoriated regions. In private practice I have ordered oxide of zinc ointment to be applied to the eczematous patches, and,

even without any treatment, as a rule, these heal rapidly when the sulphur ointment has been used elsewhere for a few nights; I also, of course, giving directions as to baths, use of soaps, etc. There are, of course, more elegant preparations, but this does not stain clothing, and does its work; in fact, one of the most interesting results of my observations of these cases of scabies has been the decided success of treatment. In speaking so decidedly as to the usual success of treatment, I do not wish to be understood, as regarding the disease a simple one to treat; on the contrary, I have been very much surprised at this success especially in a class of patients that are not of the most cleanly, and without doubt, many cases have relapsed, or perhaps not even improved much, which I never have seen again. I think that one of the most important lessons to be got from a study of scabies, is the great advantage that would be gained to the community if such patients could be thoroughly treated by skilled employees of the hospitals and dispensaries to apply the topical treatment properly, and if baths could be furnished for them. These, and a skilled supervision of schools, factories, workshops, jails and even general hospitals, would certainly furnish a great help in controlling if not stamping out the disease. The other points of interest to me, to which I have attempted to call attention, are, the fact of the increasing prevalence of a disease that ought to be, as a rule, so easily recognized; the rarity of typical burrows; the constancy of characteristic lesions on the penis in male subjects, and the difference of the secondary manifestations, according to the region of the cutis, they are developed upon.